IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method comprising:

receiving a compressed video stream at a variable length decoder of a decoder/deinterlacer;

decoding a number of blocks of the compressed video stream to output a number of blocks of decoded video data using motion compensation-based interpolation logic associated with the decoder/deinterlacer, wherein the decoding is based on at least one motion compensation vector included in the compressed video stream;

generating a prediction error energy for at least one of the number of blocks;

upon determining by the decoder/deinterlacer that the prediction error energy exceeds an energy threshold or upon determining that a quantization scale factor exceeds a dequantization threshold, generating by the decoder/deinterlacer an updated motion compensation vector; and

deinterlacing at least some of the number of blocks of the decoded video data to output deinterlaced video data using the motion compensation-based interpolation logic, wherein the deinterlacing of the at least one of the blocks of the number of blocks is based on the at least one motion compensation vector included in the compressed video stream if [[a]] the prediction error energy for the at least one motion compensation vector is less than [[a]] the energy threshold and the quantization scale factor is less than the dequantization threshold, and wherein the deinterlacing of the at least one of the number of blocks is based on the updated motion compensation vector if the prediction error energy exceeds the energy threshold or the quantization scale factor exceeds the dequantization threshold.

~~generating the prediction error energy of the block using the decoder/deinterlacer, wherein generating the prediction error energy of the block comprises:~~

~~squaring the values of a number of transform coefficients in the block to generate squared values; and~~

~~summing the squared values to generate the prediction error energy for the block.~~

2.-6. (Canceled).

7. (Previously Presented) A method comprising:

deinterlacing a block of a frame of video based on a vertical interpolation, if the block of the frame of the video is intra coded using interpolation logic of a decoder/deinterlacer;

deinterlacing the block of the frame of the video with a motion compensation vector that is derived from decoding the block of the frame of the video using the interpolation logic if the block of the frame of the video is not intra coded and if a de-quantization scale factor is less than a scale factor threshold and if a prediction error energy of the block is less than an energy threshold, wherein the energy threshold varies according to a type of video associated with the block; and

performing motion estimation on the block of the video using motion estimation logic of the decoder/deinterlacer to generate an updated motion compensation vector if the block of the frame of the video is not intra coded and if the de-quantization scale factor is greater than the scale factor and if the prediction error energy of the block is greater than the energy threshold; and

deinterlacing the block of the frame of the video with the updated motion compensation vector using motion compensation-based interpretation logic of the decoder/deinterlacer if the block of the frame of the video is not intra coded and if the de-quantization scale factor is greater than the scale factor and if the prediction error energy of the block is greater than the energy threshold.

8. (Original) The method of claim 7, wherein performing motion estimation on the block of the video to generate the updated motion compensation vector comprises performing motion estimation on the block of the video to generate the updated motion vector using the motion compensation vector as an initial candidate motion vector.

9. (Previously Presented) The method of claim 7, further comprising decoding the frame of the video using a variable length decoder.

10. (Previously Presented) The method of claim 9, wherein decoding the frame of the video comprises:

dequantizing a compressed bitstream that includes the frame of the video to generate a number of transform coefficients based on the de-quantizing scale factor using de-quantization logic of the decoder/deinterlacer; and

performing an inverse transform operation on the number of transform coefficients using inverse transform logic of the decoder/deinterlacer to generate a number of pixels representative of the frame of the video.

11. (Previously Presented) The method of claim 10, wherein decoding the frame of the video further comprises performing motion compensation for a block in the frame of the video using the motion estimation logic if the block is not intra coded and has been encoded using motion compensation.

12. (Previously Presented) The method of claim 7, further comprising generating the prediction error energy of the block using prediction error energy logic of the decoder/deinterlacer.

13. (Original) The method of claim 12, wherein generating the prediction error energy of the block comprises:

squaring the values of the transform coefficients in the block to generate squared values; and

summing the squared values to generate the prediction error energy for the block.

14. (Previously Presented) A machine-readable medium that provides instructions, which when executed by a machine, cause said machine to perform operations comprising:

decoding a compressed video stream to output a decoded video stream, wherein the decoding extracts at least one decode parameter, wherein the decoding comprises performing a de-quantization based on a de-quantization scale factor, wherein an output of the de-quantization has a prediction error energy; and

deinterlacing the decoded video stream to output a deinterlaced video stream, using the at least one decode parameter extracted by the decoding, if the prediction error energy is less than an energy threshold or if the de-quantization scale factor is less than a de-quantization threshold, wherein the de-quantization threshold varies based on a type of the compressed video stream.

15. (Original) The machine-readable medium of claim 14, wherein the at least one decode parameter comprises a motion estimation vector.

16. (Original) The machine-readable medium of claim 14, further comprising generating the prediction error energy of the block.

17. (Original) The machine-readable medium of claim 16, wherein generating the prediction error energy of the block comprises:

squaring the values of a number of transform coefficients in the block to generate squared values; and

summing the squared values to generate the prediction error energy for the block.

18. (Currently Amended) A machine-readable medium that provides instructions, which when executed by a machine, cause said machine to perform operations comprising:

decoding a number of blocks of a compressed video stream to output a number of blocks of decoded video data, wherein the decoding is based on at least one motion compensation vector included in the compressed video stream;

generating a prediction error energy for at least one of the number of blocks;

upon determining that the prediction error energy exceeds an energy threshold or upon determining that a quantization scale factor exceeds a dequantization threshold, generating an updated motion compensation vector; and

deinterlacing the number of blocks of the decoded video data to output deinterlaced video data, wherein the deinterlacing of the at least one of the blocks of the number of blocks is based on the at least one motion compensation vector included in the compressed video stream if [[a]] the prediction error energy for the block is less than [[a]] the energy threshold and the quantization scale factor is less than the dequantization threshold, and wherein the deinterlacing of the at least one of the number of blocks is based on the updated motion compensation vector if the prediction error energy exceeds the energy threshold or the quantization scale factor exceeds the dequantization threshold.; ~~and~~

~~generating the prediction error energy of the block using a decoder/deinterlacer, wherein generating the prediction error energy of the block comprises:~~

~~squaring the values of a number of transform coefficients in the block to generate squared values; and~~

~~summing the squared values to generate the prediction error energy for the block.~~

19.-25. (Canceled)

26. (Previously Presented) A system comprising:

a deinterlacer to deinterlace a block of a frame of video with a motion compensation vector that is derived from a decode operation performed on the frame of the video if a prediction error energy for the block is less than an energy threshold, wherein the energy threshold varies based on a type of video associated with the block;

a random access memory to store the deinterlaced frame of the video; and

a display to display the deinterlaced frame of the video.

27. (Original) The system of claim 26, wherein the display is a progressive screen display.

28. (Original) The system of claim 26, wherein the deinterlacer is to deinterlace the block of the frame of video with the motion compensation vector that is derived from the decode operation of the frame of the video if a de-quantization scale factor for the block is less than a de-quantization threshold.

29. (Original) The system of claim 26, wherein the prediction error energy comprises a Discrete Cosine Transform energy for the block.

30. (Previously Presented) The method of claim 3, wherein the de-quantization threshold varies based on a type of video associated with the block.